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2,373,855

COLLAR SUPPORT

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Fig. 1.

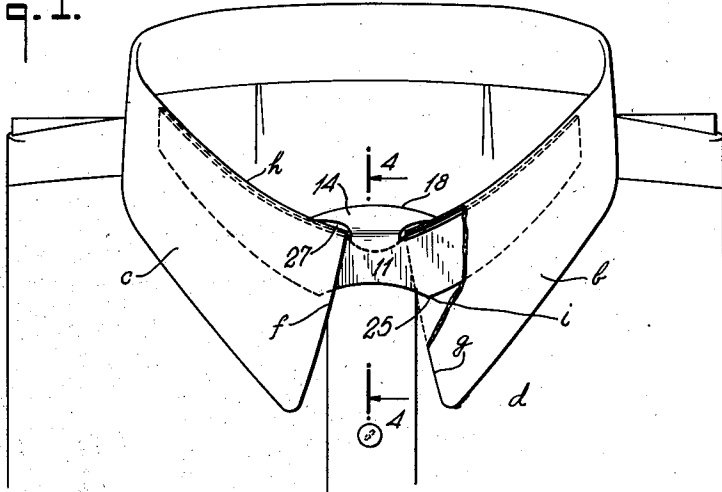


Fig. 2.

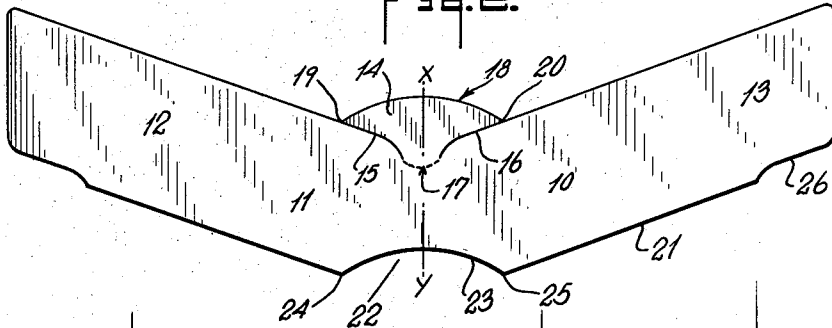


Fig. 5.

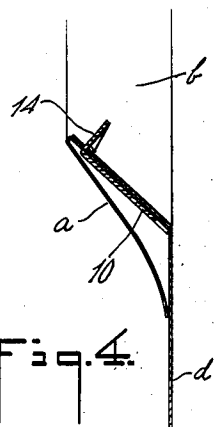
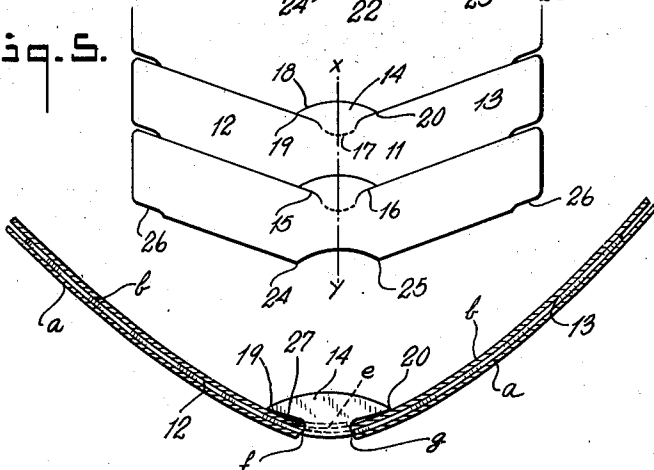


Fig. 3.

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COLLAR SUPPORT

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11 Claims. (Cl. 223-83)

This invention relates to a collar support or laundry board of the type usually employed by laundries for holding shirt collars in their closed, freshly-laundered position and for giving some rigidity to the collars while stacked or packaged prior to being worn.

The primary object of the invention is to provide an extremely cheap form of collar support and which at the same time will function efficiently to give vertical reinforcement to the laundered collar; which will tend to resist inward collapsing at the front of the collar into the neck opening; which will be easy to manufacture by simple machine operation; easy to apply to the shirt by simple manual manipulation; which can be locked in position automatically incidental to installing it in place; which will resist accidental displacement and which can be easily removed by the user when preparing the shirt for use.

The invention particularly features the forming of the support simply as a one-piece strip of cardboard or other paper-like material, free of the usual metal fasteners and formed of the least possible amount of the cardboard material capable of performing its intended function and which can be used on shirts in which collar buttons are present or absent. Instead of bendable metal fasteners such as are disclosed in Patent No. 2,248,849 of July 8, 1941, the present disclosure features a clamping structure formed entirely of cardboard and which depends upon the spring or resiliency of the shirt collar to hold the shirt collar in closed position and for pinching together the free ends of the collar to hold the same in the position they would assume if a collar button were used.

The invention particularly features the use of a more or less rigid brace or internal strut which is located within the outlines of the neck opening and engages edgewise against the inner leaf of the collar and across its front opening to resist any tendency of the collar ends to move inwardly towards each other from their preset laundered position.

Various other objects and advantages of the invention will be in part obvious from an inspection of the accompanying drawing and in part will be more fully set forth in the following particular description of one form of collar support embodying the invention, and the invention also consists in certain new and novel features of construction and combination of parts hereinafter set forth and claimed.

In the accompanying drawing,

Fig. 1 is a view in front elevation of the upper portion of a freshly laundered sheet with a preferred embodiment of the invention installed in operative position thereon and with parts broken away and normally hidden parts shown in dotted outline;

Fig. 2 is a plan view of the shirt collar support shown in Fig. 1 in its initial flat form before its locking tab is bent into its locking position;

Fig. 3 is an enlarged sectional view taken horizontally just below the bend of the collar at the front thereof in Fig. 1 showing the collar support in plan and the overlapping collar tabs in dotted outline;

Fig. 4 is an enlarged vertical sectional view taken on the line 4-4 of Fig. 1; and

Fig. 5 is a plan view of a strip of stock cardboard showing the manner of cutting therefrom the succeeding collar support.

In the drawing and referring first to Fig. 2, it will be noted that the support 10 is formed solely by cardboard or other semi-flexible paper-like material, is free of any clips, and is free of any button holes or other usual fastening devices. It is simply a strip of cardboard cut to shape and capable of bending into operative form.

Referring first to the blank shown in Fig. 2 when in position as shown in Fig. 1, the support comprises a long, narrow strip 11 of wide spreading V-form dimensioned to fit between the outer leaf *a* and the inner leaf *b* of a downturned collar *c* of a shirt *d*. The strip as shown in Fig. 1 extends in upstanding position across the open front of the shirt and projects for a material distance in opposite directions beyond the overlapping tabs *e* of the collar. Of course, the depth of shirt collars varies with difference in collar sizes and styles. As it is the intent of this disclosure to provide only one standard size of support, that width of support must be selected which will most nearly fit the average form of collar passing through the commercial laundries.

The support considered as a whole is symmetrical relative to a line *x-y* bisecting the angle formed between the legs 12 and 13 of the strip 11. The support is provided at its interior angle with a fan-shaped extension 14 forming a locking tab or internal strut integral with the strip. The extension is four-sided and is formed by a pair of inwardly extending and relatively concaved slits 15-16 one from each leg on opposite sides of the line *x-y*. These slits form the two opposite radial side edges of the fan-shaped tab 14. The strip is provided centrally thereof with a score line 17 which connects the inner ends of the

slits 15-16, defines the inner edge or shorter side of the tab 14 and forms a hinge line about which the tab is to be bent from the position shown in Fig. 2, out of the plane of the balance of the support to extend inwardly of the collar and across the top edges of the overlapping collar tabs *e* and to lie in a plane at right angles to the plane of the upstanding strip as shown in Figs. 3 and 4. It is within the scope of this disclosure to make the score line straight but a better form of bend or flexure is provided where the score line is slightly concaved as shown in the drawing.

The fourth or outer edge or side 18 of the fan-shaped tab is curved in an outwardly extending arc, is of greater length than the score line side 17, and extends transversely from the upper edge of one leg 12 to the upper edge of the other leg 13.

The opposite ends of the edge 18 form with the adjacent curved slits 15 and 16 a pair of sharply pointed corners 19-20. These pointed corners form a distinctly novel feature of this disclosure. The width of the locking tab, that is, the distance between the points 19 and 20 is materially less than the length of the strip 11 but the tab is materially wider than the opening between the ends *f*, *g*, of the outer leaf *b* at the front side of the shirt.

The lower edge 21 of the strip is provided at its external angle with a recess 22 defined by a concaved edge 23. This edge coacts with the balance of the lower edge to form two widely spaced apart sharp corners 24 and 25 on opposite sides of the bisecting line *x-y*. The sharp corners 19-20 of the tab and the sharp corners 24-25 at the bottom of the strip are equidistantly spaced from the medial bisecting line *x-y*, so that the locking corners on each side are located one above the other on one at the inside and the other outside of the collar. While the legs 12 and 13 may be of uniform width, it is suggested that the lower edge 21 may be cut back slightly as shown at 26 in order to provide for a better fit in those cases where the collar depth is reduced over the shoulders.

In operation the support is located with its strip 11 fitted between the leaves or folds of the collar with the locking tab initially located in upstanding position between the opening at the front of the collar. The strip 11 is intended to provide sufficient rigidity vertically to give support to the collar and to resist accidental crushing of the same and the strip possesses sufficient flexibility transversely to permit of it being curved and contoured to fit in the curve at the front of the collar.

In locating the strip in place its upper edge will engage more or less with the underside of the fold *h* forming the upper edge of the collar thus giving some strength to this portion most liable to be bent when the shirts are stacked or boxed for delivery. The strip projects downwardly and out of the collar if the collar should be of small depth, that is below the lower sewed edge of the inner leaf *b* and bears more or less on the portion *i* of the soft material forming the shirt front just below the collar. Under these conditions, the two sharp corners 24 and 25 in the bottom edge of the support tend to bite into the material of the shirt front. This has the effect of anchoring the support to the shirt and tends to resist accidental slipping of the support from its manually located operative collar supporting position.

The upstanding tab 14 is then bent out of the more or less vertical plane of the strip inwardly

into the interior or neck room of the collar and over the upper edges of the overlapping collar tabs *e*. It is finally moved into a more or less horizontal position substantially at right angles to the general plane of the upstanding strip. The width of the locking tab, that is, the distance between the pointed corners is designed so that it will be slightly longer than the normal distance between the parts on the inner leaf where the pointed corners are intended to contact. It is therefore necessary in bending the locking tab into position to spread opposite sides of the collar apart, momentarily, or otherwise distort the normal closed configuration of the laundered collar in order to accommodate the locking tab in the space in which it is intended to occupy. When in the substantially horizontal position shown, the collar is released and thus has the effect of causing the spring of the collar to react on the tab and thus cause the pointed corners defining the opposite width-ends of the tab to bite into the inner leaf of the collar. The sharp corners act to provide frictional resistances to any tendency of the collar to slip past the locking tab and this in turn maintains the overlapping collar tabs in their closed position even in the absence of the usual collar button.

The locking tab when in the position as shown in Fig. 3 acts as an internal brace, strut, or spreader for resisting inwardly directed distorting pressures on the open ends of the collar. For this purpose, the extension 14 possesses sufficient rigidity to maintain itself in its flat condition while in use. The ordinary bendable stock cardboard usually used for laundry boards possesses in the small size extension 14 the requisite resistance to buckling.

The locking tab will operate as described when the slits 15-16 are straight as well as when curved as shown. However, the curved edge structure adds a little to the desired sharpness of the angle formed between these side edges and the outer edge and further providing curved edges to the sides of the tab provides a small clearance shown at 27 in Figs. 1 and 3, between the curved side edges and the adjacent portions of the collar. This clearance minimizes the area of contact between the collar and the cardboard tab, confines it more or less to two points at 19 and 20, and causes the collar to bend slightly over the pointed ends of the tab, thus further defeating any tendency of the collar to slip relative to the tab.

The illustrated form of the invention has been designed particularly to effect economy in the use of material and features the forming of the lower edge recess 22 with its corners 24 and 25 as the result of forming the featured form of locking tab 14 at the upper edge. There is no waste of material. The supports are formed as shown in Fig. 5 from a length of cardboard cut transversely of its length to form a long series of the strips of identical V-form. The cutting of the tab of one strip forms the recess in the next adjacent strip and this can be done with one operation of the cutting die.

I claim:

1. A one-piece collar support formed of a paper-like material comprising a long, narrow strip of wide spreading V-form adapted to fit between the leaves of a downturned shirt collar, said support provided at the interior angle of said strip with an integral fan-shaped tab, symmetrically disposed relative to a line bisecting said angle and

having a width materially less than the length of the strip, said support having a pair of inwardly concaved slits extending into the same, one from each leg of the strip on opposite sides of said bisecting line and forming the opposite radial side edges of the fan-shaped tab, said side edges coacting with the outer edge of the tab to form a pair of sharply pointed corners, said strip provided with a score line connecting the inner ends of the slits, defining the inner edge of the fan-shaped tab and forming a hinge line about which the tab is adapted to be bent out of the plane of the balance of the support to extend inwardly of the collar across the top edges of the overlapping collar tabs in position to cause the pointed corners to bear against the inner leaf of the collar and said strip provided at its exterior angle with a concaved recess, opposite ends of the edge forming the recess coacting with the lower edges of the strip to form two sharp corners on opposite sides of said bisecting line.

2. A shirt collar support comprising a member adapted to be inserted between the inner and outer folds of a collar and a locking tab projecting integrally from and beyond the upper edge of said member when said member and tab are lying in a common plane, and said tab adapted to be bent out of the plane of the balance of the support and across the overlapping tabs of the collar, said locking tab having its outer edge formed with a pair of point-forming corners adapted to engage and in effect to bite into the inner face of the inner fold of the collar on opposite sides of its front opening when the support is located in its operative position in the collar.

3. A one-piece collar support including a long strip adapted to be located between the leaves of a collar and a short extension having a length measured in the direction of the long dimension of the strip greater than its maximum width at right angles to such long dimension projecting integrally beyond one edge of the strip adjacent its midlength and adapted to be bent from the strip inwardly over a ninety degree angle to project across the top edges of the overlapping tabs of the collar and into position substantially at right angles to the collar for edgewise engagement with the inner leaf of the collar to form an internal strut extending flatwise in the plane of the collar opening and tending by reason of its rigidity in its own plane to resist inward collapsing of the front of the collar.

4. A one-piece collar support formed of a paper-like material including upstanding bendable means adapted to fit between the leaves of a downturned collar, the lower edge of said means provided with a pair of pointed corners for engaging and in effect for biting into the body of the shirt just below the collar, and other means adapted to be bent from the first named means into a plane at right angles to the general plane of the upstanding means and across the upper edges of the overlapping collar tabs and provided with a pair of pointed corners for engaging the inner leaf of the collar on opposite sides of its opening to hold the collar from accidentally opening.

5. A one-piece collar support formed solely of a paper-like material and including a strip fashioned to fit in an upstanding position between the leaves of a downturned shirt collar and provided adjacent its midlength with a locking tab projecting from the upper edge of the strip and adapted to be bent from the plane of the strip over the overlapping collar tab to engage the inner leaf of

the collar to hold the same in closed position, the lower edge of the strip provided adjacent its midlength with a pair of sharp corners for engaging and in effect for biting into the body of the shirt just below the open front of the collar.

6. A one-piece collar support formed solely of a paper-like material comprising a long narrow strip fashioned to fit in upright position between the leaves of a downturned shirt collar, said strip provided adjacent its midlength and along its lower edge with a pair of shirt engaging sharp corners tending to prevent the support from shifting accidentally from its operative collar supporting position, and a locking tab projecting integrally from the upper edge of the strip and adapted to be bent over the overlapping collar tabs into position substantially at right angles to the upstanding strip, said locking tab provided at opposite ends thereof with a pair of sharply pointed corners for engaging and in effect for biting into the inner leaf of the collar to hold the same in closed position.

7. A one-piece collar support formed solely of a slightly flexible paper-like material comprising a strip fashioned to fit in upstanding position between the leaves of a downfolding shirt collar and a fan-shaped locking tab adapted to be bent about its narrowest portion at its connection with the strip to extend over the overlapping collar tabs to extend into the collar opening, bridged across the same in position substantially at right angles to the upstanding strip, said tab having sufficient rigidity to maintain itself substantially flat even when pressed in the direction of its plane by the collar and said locking tab provided with means at its inner edges for engaging edgewise in bearing engagement with the inner leaf of the collar on opposite sides of its overlapping tabs to hold the collar in closed position.

8. An assembly formed from a length of cardboard cut transversely of its length to form the assembly as a series of strips of identical form, each strip having a wide spreading V-form with a tab projecting integrally from its internal angle and having a recess at its external angle, the cutting of the tab of one strip forming the recess in the next adjacent strip, the outer edge of each tab forming a line bridging across the internal angle, and each strip provided with a pair of curved slits defining opposite radial side edges of its associated tab, said outer edge of the tab coacting with its radial edges to form a pair of sharply pointed corners and the edge defining the recess being curved and forming an arched line bridging across the external angle and coacting with adjacent edges of the strip to form a pair of sharp corners.

9. In a collar support, the combination of a long tab constituting a means forming an internal strut fashioned for location in the front portion of a collar opening of a down-turned shirt collar between the top and bottom edges, and being substantially rigid in the plane of the opening, for resisting internal collapsing of the front of the collar adjacent its upper edge into the neck opening and means for fitting between the leaves of the collar for locating said strut in place.

10. An elongated collar support dimensioned so as to be confined to the front portion of the collar and including a long narrow upstanding strip curved slightly about a transverse medial line and adapted to conform to the curved front of a downturned shirt collar and to fit between the leaves of the collar to give it at least some upstanding rigidity, and an extension projecting

laterally and integrally from one edge of the strip in spaced relation to its ends, said extension when the collar support is in position, extending horizontally in a plane substantially at right angles to the upstanding strip and the edges of the extension adjacent the strip adapted to bear edgewise against the inner face of the collar and said extension being substantially rigid in its own plane and adapted to form an internal strut for bridging across the inner sides of the overlapping tabs of the collar.

11. A one-piece collar support formed of a paper-like material comprising a long narrow strip adapted to fit between the leaves of a downturned collar to give it upstanding rigidity, said support provided at one edge of said strip and adjacent its midlength with an integral exten-

sion of materially less length than the length of the strip, having a length sufficient to bridge across the rear sides of the overlapping collar tabs and having a maximum width materially less than its length to minimize the extent of its projection into the collar opening, said extension adapted to be bent across its jointure with the strip, across the top edges of the overlapping collar tabs into position extending across the neck opposing and at right angles to the narrow strip to form an internal strut at the front of the collar and said extension provided with means for bearing on the inner leaf of the collar on opposite sides of the overlapping collar tabs to hold the same in closed position.

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